

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

CLAIMS

1. An active headset having at least two operating states and comprising:
one or more earcups;
means for sensing a condition within at least one of the earcups; and
means responsive to the means for sensing a condition within the one earcup
for changing the operating state of the headset.
2. The active headset of claim 1 wherein the condition is inaudible.
3. The active headset of claim 1 wherein the means for sensing a condition within at least one of the earcups includes a microphone coupled to a bandpass filter, the bandpass filter coupled to a threshold detector, the threshold detector coupled to a processor, and the processor coupled to a power switch.
4. The active headset of claim 1 wherein one of the two operating states is an on state and the other is an off state, and wherein the means for changing the operating state of the headset is responsive to the sensed condition to change from the on state to the off state.
5. The active headset of claim 1 wherein one of the two operating states is an on state and the other is an off state, and wherein the means for changing the operating state of the headset is responsive to the sensed condition to change from the off state to the on state.
6. The active headset of claim 1 wherein the means for sensing a condition includes an audio transducer, light sensor, a pressure sensor, or a temperature sensor.

7. The active headset of claim 1 wherein the means for sensing a condition senses movement or acceleration of at least a portion of the headset.
8. An active headset having at least two operating states and comprising:
means for sensing engagement or disengagement of the headset with a user; and
means responsive to the means for sensing engagement or disengagement for
changing the operating state of the headset.
9. An active headset having at least two operating states and comprising:
one or more earcups;
means for sensing a condition that is within at least one of the earcups; and
means, responsive to a perceived absence of the condition, for changing the
operating state of the headset.
10. The active headset of claim 9 wherein the condition is inaudible.
11. The active headset of claim 10 wherein the means for sensing a condition within at least one of the earcups includes a microphone coupled to a bandpass filter, the bandpass filter coupled to a threshold detector, the threshold detector coupled to a processor, and the processor coupled to a power switch.
12. The active headset of claim 9 wherein one of the two operating states is an on state and the other is an off or standby state, and wherein the means for changing the operating state of the headset is responsive to the sensed condition to change from the on state to the off or standby state.
13. The active headset of claim 9 wherein the means for sensing a condition includes an audio transducer, light sensor, a pressure sensor, or a temperature sensor.
14. The active headset of claim 9 wherein the means for sensing a condition senses movement or acceleration.

15. An ANR headset having at least two operating states and comprising:
one or more earcups;
means for sensing a condition based on user jaw movements or blood
movement within a user's head; and
means for changing the operating state of the headset from an on state to an
off state in response to a perceived absence of the condition.
16. The headset of claim 15 wherein the predetermined period of time is at
least one minute.
17. An ANR headset having at least two operating states and comprising:
one or more earcups;
means for sensing a condition based on user jaw movements or blood
movement, wherein the means for sensing includes a first audio
transducer within one of the earcups; and
means, coupled to the means for sensing the condition, for changing the
operating state of the headset from an on state to an off or standby
state, wherein the means for changing the operating state includes a
bandpass filter, a threshold detector, a processor, and a power switch,
with the bandpass filter coupled between the threshold detector and
the first audio transducer and the processor coupled between the
threshold detector and the power switch.
18. The headset of claim 17, wherein the means for changing the operating state
of the headset changes the operating state from the on state to the off state in
response to perceived absence of the condition for at least one minute.
19. The headset of claim 17 further including means for changing the operating

state of the headset from the off state to the on state.

20. The headset of claim 17, wherein the one earcup engages the head of a user to define a volume and the means for sensing senses changes of the volume.
21. An ANR headset having at least an active operating state and an inactive or standby operating state and comprising:
 - one or more earcups;
 - an ANR microphone for sensing a condition based on user jaw movements or blood movement within the user's head;
 - a timer circuit for measuring duration of a perceived absence of the condition; and
 - a switch coupled to the timer circuit for switching the ANR headset from one of the active and inactive operating states to the other of the active and inactive operating states.
22. The ANR headset of claim 21, wherein the timer circuit comprises:
 - a threshold detector; and
 - a microprocessor coupled to the threshold detector and to the switch.
23. The ANR headset of claim 21, wherein the predetermined amount of time is at least one minute.
24. A method of operating an ANR headset including an audio transducer attached to an earcup for engaging the ear of a user, the method comprising:
 - sensing a condition; and
 - switching at least a portion of the ANR headset from an active state to an inactive or standby state in response to a perceived absence of the

condition for at least a predetermined amount of time.

25. The method of claim 24, wherein switching at least the portion of the ANR headset comprises switching in response to sensing an absence of certain frequency content from the output of an audio transducer within the cavity for an amount of time of at least one minute.
26. The method of claim 24, wherein the ANR headset includes an ANR driver within the cavity and ANR circuitry coupled to the ANR driver; and wherein the method further comprises switching the ANR circuitry from the inactive state to the active state in response to sensing deflection of a portion of the ANR driver.
27. The method of claim 24, wherein the certain frequency content is no greater than five Hertz.
28. The method of claim 27, wherein switching at least a portion of the ANR headset from an active state to an inactive state in response to a perceived absence of the condition comprises:
starting a timer in response to sensing the condition, with the timer
configured to expire after measuring the predetermined amount of
time; and
switching at least the portion of the ANR headset from the active state to the
inactive state in response to expiration of the timer.
29. An ANR headset comprising:
an input node for receiving an electrical signal correlated with a user wearing
the headset; and
a digital processor coupled to the input node and configured to issue a turn-
off command signal for at least a portion of the ANR headset after

perceiving an absence of the electrical signal at the input node for at least a predetermined period of time.

30. The ANR headset of claim 29, wherein the electrical signal has a frequency less than 5 Hertz.
31. The ANR headset of claim 29, further comprising:
circuitry, coupled to the input node, for detecting and indicating detection of
a condition based on user jaw movements or blood movement.
32. The ANR headset of claim 31, wherein the circuitry for detecting and
indicating detection of the condition, includes a microphone, a bandpass
filter, and a threshold detector, with the bandpass filter coupled between the
threshold detector and the microphone.
33. The ANR headset of claim 29, further comprising a switch coupled to
receive the turn-off signal from the processor.
34. The ANR headset of claim 33, further comprising:
a plurality of battery connection terminals for coupling to one or more
batteries; and
a switching regulator circuit coupled to the plurality of battery terminals, with
the regulator circuit having a shutdown pin coupled to a terminal of the
switch.
35. An ANR headset comprising:
at least one audio transducer for placement adjacent an ear of a user;
circuitry for sensing a low-frequency electrical signal having a frequency no
greater than five Hertz; and
circuitry responsive to a perceived absence of the low-frequency electrical
signal to reduce power usage of the headset.

36. The ANR headset of claim 35, wherein the circuitry for sensing a low-frequency electrical signal comprises:
a bandpass filter; and
a threshold detector coupled to the bandpass filter.
37. The ANR headset of claim 35, wherein the circuitry responsive to a perceived absence of the low-frequency electrical signal, to reduce power usage of the headset, comprises:
means, responsive to the perceived absence of the low-frequency electrical signal, for reducing power usage of the headset.
38. The ANR headset of claim 35, wherein the circuitry responsive to a perceived absence of the low-frequency electrical signal to reduce power usage of the headset, comprises:
circuitry for determining whether the perceived absence has lasted at least a predetermined amount of time; and
circuitry for reducing power supplied from a power supply circuit to a portion of the ANR headset in response to determining the perceived absence has lasted at least the predetermined amount of time.
39. The ANR headset of claim 38, wherein the circuitry for reducing power supplied from the power supply circuit, comprises:
a processor having an output pin; and
a transistor coupled to the output pin of the processor.
40. The ANR headset of claim 38, wherein the predetermined period of time is at least one minute.